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INNO-SAFE-LIFE

REPORT

STAFF TRAINING

Organized by Slovenska Polnohospodarska Univerzita v Nitre, Slovakia

P3 of the ERASMUS KA220-HED - Cooperation partnerships in higher education, project no. 2023-1-RO01-KA220-HED-000164767, Partnership for innovation on the exchange of best practices and the design of joint collaborative initiatives at European level related to the awareness of the effects contamination on human health

The specific objectives of Work Package n°2 – Teaching, Training and Learning are to provide continuous training for specialists by addressing international and interdisciplinary topics relevant to soil, food, and health contamination; to educate and support students in developing and implementing innovative techniques and protocols at institutional, national, and international levels; to integrate expertise from agriculture, horticulture, health, and industry in order to ensure effective knowledge transfer, promote sustainable practices, and address global challenges such as climate change and antimicrobial resistance; and to foster professional development, civic engagement, and entrepreneurial skills through both theoretical and practical activities designed to stimulate active participation and innovation.

The main results of Work Package n°2 – Teaching, Training and Learning will include the formation of a well-prepared group of experts with advanced interdisciplinary and complementary qualifications, as well as a significant number of students equipped with the skills to develop innovative solutions in the fields of agriculture, horticulture, health, and industry. The activities will generate progress and training reports, as well as digital support materials, to ensure the transfer of knowledge and best practices. Direct beneficiaries—academic staff, researchers, industry specialists, and students—will gain both theoretical and practical competencies, while indirect beneficiaries, including the wider population, will benefit from improved access to qualified professionals and comprehensive educational resources. These results will strengthen international cooperation, enhance professional development, and reinforce the connection between higher education, research, industry, and society.

Staff training period: 18-22 March 2024

The training session organized within Work Package n°2 at Slovenská Polnohospodárska Univerzita v Nitre, Slovakia (P3), was designed to provide participants with comprehensive interdisciplinary knowledge and practical competencies related to soil-to-food-to-health contamination, sustainable resource use, and innovative approaches to address global challenges such as climate change and antimicrobial resistance. The program was structured into two main parts: a theoretical component (Days 1–3) and a practical



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component (Days 4–5), combining lectures, group work, laboratory activities, and applied case studies.

1. Theoretical Part (Days 1–3)

Objectives

- To introduce participants to international and interdisciplinary perspectives in agriculture, horticulture, food safety, health, and industry.
- To provide a foundation of knowledge on contamination pathways, toxicology, food microbiology, pesticide use, antimicrobial resistance, soilborne pathogens, and food supplement safety.
- To stimulate dialogue and exchange of good practices among experts, students, and industry representatives.

Content and Activities

- **Day 1:** Presentations focused on project introduction, institutional overview, and fundamental aspects of food microbiology and biotechnology.
- **Day 2:** Sessions addressed human exposure to toxic substances, food–health relationships, pesticides, and antibiotic resistance, followed by interactive working group meetings and discussions.
- **Day 3:** Lectures covered chemical constituents of food, dietary supplements, soilborne phytopathogenic fungi, antimicrobial waste, and safety in food supplement production.

Outcomes

Participants gained a solid theoretical understanding of the key topics underpinning the project's objectives, developed critical awareness of interdisciplinary challenges, and actively engaged in discussions that prepared the ground for the practical sessions.

2. Practical Part (Days 4–5)

Objectives

- To reinforce theoretical knowledge through laboratory training and applied activities.
- To develop participants' technical skills in microbiological, chemical, and biotechnological analyses.
- To apply interdisciplinary approaches in addressing contamination scenarios and developing innovative solutions.

Content and Activities

- **Day 4:** Laboratory workshops on microbiological analysis of food, assessment of soil and plant contamination, and simulation exercises on contamination pathways.



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Participants worked in groups to design intervention strategies and presented innovative solutions.

- **Day 5:** Training on safety and quality control of food supplements, including demonstrations of industrial processes and quality assurance measures. The final session was dedicated to evaluating acquired knowledge through tests, participant feedback, and certification.

Outcomes

Participants developed hands-on skills in microbiological, soil, and food supplement analyses, applied interdisciplinary perspectives to real-world contamination problems, and enhanced their competencies in designing and implementing sustainable solutions. The evaluation phase confirmed the achievement of learning objectives and provided valuable feedback for improving future training sessions.

The combined theoretical and practical training provided within Work Package n°2 successfully met its objectives by equipping both specialists and students with interdisciplinary knowledge and applied skills. The program fostered active participation, professional development, and entrepreneurial awareness while ensuring the transfer of good practices between academia, industry, and society. These outcomes contribute significantly to the project's overall goal of strengthening international cooperation and building capacity to address soil-to-food-to-health contamination challenges.





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